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	7590	01/10/2008		EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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	Application No.	Applicant(s)						
	10/795,922	COMLEKOGLU	ET AL.					
Office Action Summary	Examiner	Art Unit						
	Carlton V. Johnson	2136						
The MAILING DATE of this communication app Period for Reply	pears on the cover sheet w	ith the correspondence a	ddress					
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING D - Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period - Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailine earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNI 36(a). In no event, however, may a will apply and will expire SIX (6) MOI e, cause the application to become A	CATION. reply be timely filed NTHS from the mailing date of this BANDONED (35 U.S.C. § 133).	·					
Status	·							
1) Responsive to communication(s) filed on 24 C	october 2007							
<u> </u>	action is non-final.							
<u> </u>	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is							
closed in accordance with the practice under the	•	•						
Disposition of Claims	•		•					
4)⊠ Claim(s) <u>29-54</u> is/are pending in the applicatio	n		•					
	4a) Of the above claim(s) is/are withdrawn from consideration.							
5) Claim(s) is/are allowed.	· · · · · · · · · · · · · · · · · · ·							
6)⊠ Claim(s) <u>29-54</u> is/are rejected.								
7) Claim(s) is/are objected to.								
8) Claim(s) are subject to restriction and/o	or election requirement							
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Application Papers								
9) The specification is objected to by the Examine								
10) The drawing(s) filed on is/are: a) acc	· · · · · · · · · · · · · · · · · · ·	-						
Applicant may not request that any objection to the								
Replacement drawing sheet(s) including the correct	· · · · · · · · · · · · · · · · · · ·	- · · ·						
11) The oath or declaration is objected to by the E	xaminer. Note the attache	ed Office Action or form P	PTO-152.					
Priority under 35 U.S.C. § 119		·	•					
12) ☐ Acknowledgment is made of a claim for foreign a) ☐ All b) ☐ Some * c) ☐ None of:		§ 119(a)-(d) or (f).	·					
1. Certified copies of the priority document								
2. Certified copies of the priority document			•					
3. Copies of the certified copies of the price	·	n received in this Nationa	al Stage					
application from the International Burea	, , , , , , , , , , , , , , , , , , , ,							
* See the attached detailed Office action for a list	of the certified copies no	t received.						
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Attachment(s)	•							
1) Notice of References Cited (PTO-892)	4) Interview	Summary (PTO-413)	•					
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No	(s)/Mail Date						
Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	5)	Informal Patent Application						
	<u>-, </u>							

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 7/6/2007 has been entered.

2. This action is responding to application papers filed on 3-8-2004. Claims 1 - 28 have been cancelled. Claims 29 - 54 are new. Claims 29, 42, 49 are independent.

Response to Arguments

3. Applicant's arguments filed 10/24/2007 have been fully considered but they are moot due to new grounds of rejection.

Responses:

3.1 Applicant argues that the referenced prior art does not disclose claim limitations. (see Remarks Pages 7,8)

The Office Action delineates the prior art references and citations used to reject the set of claim limitations.

3.2 The Cheline prior art discloses that network-access is only enabled (allowed)

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after the completion of an authentication procedure. Therefore, network-access must not be allowed (denied) before authentication. This disclosure satisfies the requirement that network access is denied before authentication. (see Cheline paragraph [0049], lines 1-4; paragraph [0049], lines 8-14: access to server side from client side allowed if authentication is valid, access not allowed be authentication is successful; paragraph [0027], lines 10-15: only access VPN after authentication, access denied before authentication)

Applicant indicated that the prior art states that the radius software is part of the modem. (see Cheline paragraph [0043], lines 15-16: RADIUS software) The location of the RADIUS software does not remove the fact that network access is only allowed after authentication is successful. In any event, the Cheline prior art actually discloses that the RADIUS client software is preferably located on the modem but the RADIUS client software may not be located on the modem. This is stated as a preference for ease of use not a requirement.

RADIUS is defined as, "The de facto standard protocol for authentication servers (AAA servers). Developed by Livingston Enterprises (later acquired by Lucent).

RADIUS uses a challenge/response method for authentication." (http://computing-dictionary.thefreedictionary.com/radius) RADIUS is merely a protocol utilized to complete an authentication procedure between a client and a server. The actual access control information exists on the client and the server (authentication) systems, and network access is enabled between the client and the server.

The Cheline prior art discloses that network access between the two systems (the

end system and the enterprise (server system)) is based on at least one VPN communications connection. (see Cheline paragraph [0015], lines 2-10; paragraph [0016], lines 1-4; paragraph [0016], lines 14-17: VPN communications authenticated and setup between a client and server) Communications between the end user and the enterprise utilizes VPN connections (at least one or maybe more). The claim limitation only mentions network access between an end system and the enterprise system. The claim limitation does not disclose anything about other network accesses by the client (end) system or other end systems. The claim limitation only states that network access between an end system and an enterprise network (server system) is solely based on at least one (maybe more) VPN connection.

3.3 The Cheline prior art discloses memory utilization by the end system while communications is active. Memory is a standard part of any computer system (whether designated either as a client or a server). Memory is the electronic holding place (shorter synonym for random access memory (RAM)) for instructions and data that your computer's microprocessor can reach quickly. When your computer is in normal operation, its memory usually contains the main parts of the operating system and some or all of the application programs and related data that are being used (related data: including VPN data).

(http://searchmobilecomputing.techtarget.com/sDefinition/0,,sid40_gci212546,00.html) Memory is utilized as a work buffer (data reads, data writes) for applications such as VPN communications applications on client systems.

The Cheline prior art discloses computer systems for client and server systems.

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The claim limitation discloses utilizing a memory (random access memory) for data writes (storage of data, buffer space). The Cheline prior art discloses the capability to write data (application related data) into memory utilized for storage such as buffer space for applications such as a VPN communications application. (see Cheline paragraph [0015], lines 2-7; paragraph [0031], lines 3-5: VPN capable client system (computer, handheld device))

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- 3.4 The Cheline prior art discloses the capability for a system restart or reboot, and the Cheline prior art discloses the capability to terminate a VPN connection when inactive. The Cheline prior art discloses the capability for a VPN connection (see Cheline paragraph [0015], lines 2-10: VPN connection, client-server; paragraph [0076], lines 1-6: terminate VPN, session inactive), and the capability to perform a reboot (system restart) procedure (see Cheline paragraph [0065], lines 1-3: system reboot capability)
- 3.5 The Cheline prior art discloses an Operating System for controlling software on a prior art system. (see Cheline paragraph [0047], lines 6-10: OS) The client or end system is disclosed as a computer system, which is controlled by an Operating System (OS) whether a PC or a PDA type device. (see Cheline paragraph [0015], lines 2-7; paragraph [0031], lines 3-5: VPN capable client system (computer, handheld)) Both computer systems (client (end system), server) are VPN capable systems. (see Cheline paragraph [0015], lines 2-10: VPN system)

The Cheline and Nguyen prior art combination discloses dropping data packets,

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which are not destined for the VPN connection or are, designated as suspicious data packets. (see Nguyen paragraph [0954], lines 1-7: VPN technology; paragraph [0978], lines 4-7; paragraph [0979], lines 11-15; paragraph [1087], lines 14-17: invalid packets, not associated with application (FTP, VPN) connection dropped, also unapproved connections dropped (not initiated))

3.6 The examiner has considered the applicant's remarks concerning a thin client VPN capable end system denied network connectivity except for conducting VPN sessions, and the end system directs all data writes during VPN sessions to a temporary memory that is purged at the end of the session. Applicant's arguments have thus been fully analyzed and considered but they are not persuasive.

After an additional analysis of the applicant's invention, remarks, and a search of the available prior art, it was determined that the current set of prior art consisting of Cheline (20030041136) and Nguyen (20030172145) discloses the applicant's invention including disclosures in Remarks dated October 24, 2007.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims **36**, **47**, **53** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

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which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no disclosure in the specification or the original claims for the claim limitation, "software is adapted to inhibit modification of the software by the user". This is new matter.

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6. Claims **49 - 52** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The term "a computer readable medium" lacks antecedent basis. The term should be "The computer readable medium".

Claim Rejections - 35 USC § 103

- 7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 8. Claims 29 54 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Cheline et al. (US PGPUB No. 20030041136) in view of Nguyen et al. (US PGPUB No. 20030172145).

Regarding Claim 29, Cheline discloses a method for reducing vulnerability of a Virtual Private Network (VPN) protected network to attack by an end system, comprising the steps of:

a) permitting access by an end system to a VPN protected network on at least one VPN connection in response to authenticating a user of the end system to the VPN protected network; (see Cheline paragraph [0049], lines 1-10: user authenticated; paragraph [0049], lines 11-14: permit access (encrypted packets transferred) to end system) and

while permitting the access:

Cheline discloses attempted writes to the end system and preventing detected attempted writes to permanent memory on the end system. Cheline discloses purging temporary memory on the end system in response to detected termination of the VPN connection. (see Cheline paragraph [0015], lines 2-10: VPN connection, client-server; paragraph [0076], lines 1-6: terminate VPN, session inactive); paragraph [0065], lines 1-3: system reboot capability, system is purged) Cheline does not specifically disclose continuous monitoring, and filtering detected traffic inbound to the end system that is not on the VPN connection.

However, Nguyen discloses:

b) continuously monitoring on the end system for; (see Cheline paragraph [0506], lines 9-12; paragraph [0863], lines 5-8: monitoring; paragraph [1076],

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lines 1-8: monitoring of VPN communications)

c) continuously monitoring on the end system for traffic on the end system and filtering detected traffic inbound to the end system that is not on the VPN connection; (see Nguyen paragraph [0506], lines 9-12; paragraph [0863], lines 5-8: monitoring; paragraph [1076], lines 1-8: monitoring of VPN communications; paragraph [0954], lines 1-7: VPN technology; paragraph [0978], lines 4-7; paragraph [0979], lines 11-15; paragraph [1087], lines 14-17: invalid packet, not associated with VPN connection dropped, unapproved connections dropped) and

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d) continuously monitoring on the end system for termination of the VPN
 connection. (see Nguyen paragraph [0506], lines 9-12; paragraph [0863],
 lines 5-8: monitoring; paragraph [1076], lines 1-8: monitoring, VPN
 communications)

It would have been obvious to one of ordinary skill in the art to modify
Cheline as taught by Nguyen to enable the capability for monitoring VPN
communications and filtering detected traffic inbound to the end system that is
not on the VPN connection. One of ordinary skill in the art would have been
motivated to employ the teachings of Nguyen in order to enable the capability to
leverage the Internet for useful and vital business activities. (see Nguyen
paragraph [0029], lines 1-8: "... For enterprises and service providers alike,
knowing how to leverage the Internet for more than mere Web advertising and email access may be vital to remaining competitive in today's increasingly Net-

driven markets. Successful service providers and commercial enterprises may differentiate themselves by the way they use Internet technology to rapidly create and deploy new services and implement new business models. ... ")

Regarding Claims 30, 43, 50, Cheline discloses the method, end system, medium of claims 29, 42, 49, wherein the step of attempted writes to the end system further comprises redirecting to temporary memory detected attempted writes to permanent memory. (see Cheline paragraph [0049], lines 11-14: transfer of information between VPN connected systems (placement of transferred information on end system enables writing); paragraph [0047], lines 1-10; paragraph [0058], line 1: permanent type memory or temporary memory utilized, placement of information within temporary or permanent memory) Cheline does not specifically disclose continuously monitoring. However, Nguyen discloses continuous monitoring. (see Nguyen paragraph [0506], lines 9-12; paragraph [0863], lines 5-8: monitoring; paragraph [1076], lines 1-8: monitoring, VPN communications)

It would have been obvious to one of ordinary skill in the art to modify Cheline as taught by Nguyen to enable the capability for continuous monitoring of VPN communications. One of ordinary skill in the art would have been motivated to employ the teachings of Nguyen in order to enable the capability to leverage the Internet for useful and vital business activities. (see Nguyen paragraph [0029], lines 1-8)

Regarding Claims 31, 44, 51, Cheline discloses the method, end system, medium of

claims 29, 42, 49. (see Cheline paragraph [0016], lines 1-7: VPN communications system; paragraph [0101], lines 1-6: monitoring) Cheline does not specifically disclose continuously monitoring for traffic on the end system and filtering detected traffic outbound from the end system that is not on the VPN connection. However, Nguyen disclose wherein continuously monitoring for traffic on the end system and filtering detected traffic outbound from the end system that is not on the VPN connection. (see Nguyen paragraph [0954], lines 1-7: VPN technology; paragraph [0978], lines 4-7; paragraph [0979], lines 11-15; paragraph [1087], lines 14-17: invalid packet, not associated with VPN connection dropped based on filtering)

It would have been obvious to one of ordinary skill in the art to modify Cheline as taught by Nguyen to enable the capability for continuous monitoring of VPN communications and filtering detected traffic outbound from the end system that is not on the VPN connection. One of ordinary skill in the art would have been motivated to employ the teachings of Nguyen in order to enable the capability to leverage the Internet for useful and vital business activities. (see Nguyen paragraph [0029], lines 1-8)

Regarding Claims 32, 45, 52, Cheline discloses the method, end system, medium of claims 29, 42, 49, further comprising, before permitting the access, the step of denying network access except for performing user authentication. (see Cheline paragraph [0043], lines 1-8; paragraph [0069], lines 4-11: access only after user authentication)

Regarding Claim 33, Cheline discloses the method of claim 29, wherein the monitoring steps are performed by the end system. (see Cheline paragraph [0506], lines 9-12; paragraph [0863], lines 5-8: monitoring; paragraph [1076], lines 1-8: monitoring, VPN communications)

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Regarding Claim 34, Cheline discloses the method of claim 33, wherein the monitoring steps are performed by software having instructions executable by a processor. (see Cheline paragraph [0016], lines 21-23; paragraph [0046], lines 1-4; paragraph [0047], lines 6-20: software, program products, operating system software, perform functions; page 11, claim 13: computer-readable medium)

Regarding Claims 35, 46, Cheline discloses the method, end system of claims 34, 42, wherein the software is embedded in permanent memory. (see Cheline paragraph [0047], lines 1-10: permanent memory, memory utilized for program storage (embedded))

Regarding Claims 36, 47, 53, Cheline discloses the method, end system, medium of claims 35, 42, 49, wherein the software is adapted to inhibit modification of the software by the user. (see Cheline paragraph [0046], lines 1-4; paragraph [0047], lines 6-20: software, program products, operating system software, perform functions; page 11, claim 13: computer-readable medium)

Regarding Claim 37, Cheline discloses the method of claim 29, wherein the step of monitoring for termination further comprises logging-off the user in response to detected termination of the VPN connection. (see Cheline paragraph [0076], lines 1-5: logoff user, VPN disconnected or inactive)

Regarding Claim 38, Cheline discloses the method of claim 29, wherein the step of monitoring for termination further comprises rebooting the end system in response to detected termination of the VPN connection. (see Cheline paragraph [0076], lines 1-5: relogon, restarting end system)

Regarding Claim 39, Cheline discloses the method of claim 29, wherein the step of monitoring for termination further comprises shutting down the end system in response to detected termination of the VPN connection. (see Cheline paragraph [0076], lines 10-14: VPN disconnected, tunnel torn down)

Regarding Claim 40, Cheline discloses the method of claim 29, wherein permanent memory comprises a flash memory. (see Cheline paragraph [0047], lines 16-17; paragraph [0057], lines 3-5: flash memory)

Regarding Claim 41, Cheline discloses the method of claim 29, wherein temporary memory comprises a random access memory (RAM) disk. (see Cheline paragraph [0047], lines 1-10: permanent type memory (RAM) for program such as operating

system)

Regarding Claim 42, Cheline discloses a VPN capable end system, comprising:

- a) at least one permanent memory; (see Cheline paragraph [0047], lines 1-10: permanent type memory for program such as operating system)
- b) at least one temporary memory; (see Cheline paragraph [0058], line 1: temporary memory)
- c) at least one processor coupled to the permanent memory and the temporary memory; (see Cheline paragraph [0047], lines 1-3: processor, interface (bus) between components) and

Cheline discloses software stored on the permanent memory, the software having instructions executable by the processor while the end system is permitted access to a VPN protected network on at least one VPN connection, and termination of the VPN connection and purge the temporary memory in response to detected termination of the VPN connection. (see Cheline paragraph [0046], lines 1-4; paragraph [0047], lines 6-20: software, program products, operating system software, perform functions; page 11, claim 13: computer-readable medium; paragraph [0076], lines 1-5: VPN torn down, tunnel disconnected, security information in temporary memory removed; paragraph [0071], lines 1-3: VPN access to end system enabled) And, Cheline discloses attempted writes to the end system and preventing detected attempted writes to the permanent memory. (see Cheline paragraph [0049], lines 11-14: permit access (encrypted packets transferred) to end

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system) Cheline does not specifically disclose continuously monitoring, and filtering detected traffic inbound to the end system that is not on the VPN connection.

However, Nguyen discloses:

detected attempted writes to the permanent memory, to continuously monitor for traffic on the end system and filter detected traffic inbound to the end system that is not on the VPN connection. (see Nguyen paragraph [0954], lines 1-7: VPN technology; paragraph [0506], lines 9-12; paragraph [0863], lines 5-8: monitoring; paragraph [1076], lines 1-8: monitoring, VPN communications; paragraph [0978], lines 4-7; paragraph [0979], lines 11-15; paragraph [1087], lines 14-17: invalid packet, not associated with VPN connection dropped, unapproved connections dropped))

It would have been obvious to one of ordinary skill in the art to modify Cheline as taught by Nguyen to enable the capability for monitoring VPN communications and filtering detected traffic inbound to the end system that is not on the VPN connection. One of ordinary skill in the art would have been motivated to employ the teachings of Nguyen in order to enable the capability to leverage the Internet for useful and vital business activities. (see Nguyen paragraph [0029], lines 1-8)

Regarding Claims 48, 54, Cheline discloses the end system, medium of claim 42, 49, wherein the software further has instructions executable by the processor while the end system is not permitted the access to facilitate authentication of a user of the end

system to the VPN protected network. (see Cheline paragraph [0043], lines 1-8; paragraph [0069], lines 4-11: access only after user authentication)

Regarding Claim 49, Cheline discloses a computer readable medium comprising operating software for a VPN capable end system having instructions executable by a processor while the end system is permitted access to a VPN protected network on at least one VPN connection, attempted writes to the end system and prevent detected attempted writes to permanent memory on the end system, and for termination of the VPN connection and purge temporary memory on the end system in response to detected termination of the VPN connection. (see Cheline paragraph [0046], lines 1-4; paragraph [0047], lines 6-20: software, program products; page 11, claim 13: computer-readable medium; paragraph [0049], lines 1-10: user authenticated; paragraph [0049], lines 11-14: permit access (encrypted packets transferred) to end system; paragraph [0047], lines 1-10; paragraph [0058], line 1: permanent type memory such as for programs or temporary memory utilized) Cheline does not specifically disclose continuously monitoring, and to filter detected traffic inbound to the end system that is not on the VPN connection.

However, Nguyen discloses to continuously monitor, and to filter detected traffic inbound to the end system that is not on the VPN connection. (see Nguyen paragraph [0954], lines 1-7: VPN technology; paragraph [0506], lines 9-12; paragraph [0863], lines 5-8: monitoring; paragraph [1076], lines 1-8: monitoring, VPN communications; paragraph [0978], lines 4-7; paragraph [0979], lines 11-15; paragraph [1087], lines 14-

17: invalid packet, not associated with VPN connection dropped, unapproved connections dropped))

It would have been obvious to one of ordinary skill in the art to modify Cheline as taught by Nguyen to enable the capability for monitoring VPN communications and filtering detected traffic inbound to the end system that is not on the VPN connection. One of ordinary skill in the art would have been motivated to employ the teachings of Nguyen in order to enable the capability to leverage the Internet for useful and vital business activities. (see Nguyen paragraph [0029], lines 1-8)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlton V. Johnson whose telephone number is 571-270-1032. The examiner can normally be reached on Monday thru Friday, 8:00 - 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Moazzami can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Carlton V. Johnson Examiner Art Unit 2136

December 26, 2007

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